1. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3x - 3 > 9x + 3$$

  A. $(-\infty, a)$, where $a \in [-2.3, 0.4]$

  B. (a, ∞), where $a \in [-0.15, 1.68]$

  C. $(-\infty, a)$, where $a \in [-0.4, 1.5]$

  D. (a, ∞), where $a \in [-1.53, -0.15]$

  E. None of the above.

---

2. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 - 8x < \frac{-44x + 4}{7} \le 7 - 7x$$

  A. $[a, b)$, where $a \in [0.3, 2.48]$ and $b \in [-13.5, -6.75]$

  B. $(-\infty, a] \cup (b, \infty)$, where $a \in [0, 4.5]$ and $b \in [-12.75, -6.75]$

  C. $(-\infty, a) \cup [b, \infty)$, where $a \in [-0.75, 5.25]$ and $b \in [-11.25, -6.75]$

  D. $(a, b]$, where $a \in [-0.75, 3]$ and $b \in [-11.25, -8.25]$

  E. None of the above.

---

3. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 6 units from the number 10.

  A. $[4, 16]$

  B. $(-\infty, 4) \cup (16, \infty)$

  C. $(4, 16)$

  D. $(-\infty, 4] \cup [16, \infty)$

   E. None of the above

---

4. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 - 5x < \frac{-12x + 7}{3} \leq 6 - 6x$$

   A. $[a, b)$, where $a \in [-11.25, -6]$ and $b \in [-0.75, 4.5]$

   B. $(-\infty, a) \cup [b, \infty)$, where $a \in [-13.5, -6]$ and $b \in [1.5, 2.25]$

   C. $(-\infty, a] \cup (b, \infty)$, where $a \in [-12, -6.75]$ and $b \in [1.2, 2.7]$

   D. $(a, b]$, where $a \in [-12, -9.75]$ and $b \in [-1.5, 6]$

   E. None of the above.

---

5. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

<p style="text-align:center">No more than 2 units from the number -8.</p>

   A. $(-10, -6)$

   B. $(-\infty, -10) \cup (-6, \infty)$

   C. $(-\infty, -10] \cup [-6, \infty)$

   D. $[-10, -6]$

   E. None of the above

---

6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-6}{5} - \frac{4}{4}x < \frac{5}{9}x + \frac{3}{6}$$

   A. $(-\infty, a)$, where $a \in [-4.5, 0.75]$

   B. (a, ∞), where $a \in [-0.6, 1.57]$

C. $(-\infty, a)$, where $a \in [0, 2.25]$

D. (a, ∞), where $a \in [-1.2, -0.07]$

E. None of the above.

---

7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9 + 8x > 11x \text{ or } 5 + 7x < 8x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3.52, -0.6]$ and $b \in [3.97, 7.8]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6.83, -3.3]$ and $b \in [2.7, 4.05]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.5, -2.25]$ and $b \in [4.12, 7.72]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-7.5, -3.75]$ and $b \in [2.1, 3.38]$

E. $(-\infty, \infty)$

---

8. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{10}{4} - \frac{10}{8}x \le \frac{8}{7}x - \frac{10}{3}$$

A. $[a, \infty)$, where $a \in [1.5, 3.75]$

B. $[a, \infty)$, where $a \in [-3.75, -1.5]$

C. $(-\infty, a]$, where $a \in [-3, 2.25]$

D. $(-\infty, a]$, where $a \in [0.75, 4.5]$

E. None of the above.

---

9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7x + 6 \ge -4x + 4$$

   A. $(-\infty, a]$, where $a \in [-1.3, -0.3]$

   B. $(-\infty, a]$, where $a \in [0, 4.3]$

   C. $[a, \infty)$, where $a \in [-3.3, -0.2]$

   D. $[a, \infty)$, where $a \in [-0.1, 2.6]$

   E. None of the above.

---

10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-6 + 7x > 9x \text{ or } 6 + 4x < 7x$$

   A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.15, -1.67]$ and $b \in [2.06, 4.54]$

   B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.44, -2.54]$ and $b \in [1.46, 2.53]$

   C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.33, -2.92]$ and $b \in [1.65, 2.77]$

   D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.4, -0.75]$ and $b \in [2.7, 4.88]$

   E. $(-\infty, \infty)$

---

11. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$4x + 5 > 6x - 7$$

   A. $(-\infty, a)$, where $a \in [-8, -1]$

   B. $(-\infty, a)$, where $a \in [2, 7]$

   C. (a, ∞), where $a \in [2, 7]$

   D. (a, ∞), where $a \in [-10, -4]$

   E. None of the above.

---

12. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7 - 3x \le \frac{-22x - 8}{9} < 6 - 5x$$

A. $[a, b)$, where $a \in [6, 15]$ and $b \in [-6, -1.5]$

B. $(a, b]$, where $a \in [4.5, 13.5]$ and $b \in [-7.5, -2.25]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [8.25, 13.5]$ and $b \in [-3.75, -1.5]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [8.25, 13.5]$ and $b \in [-5.25, -2.25]$

E. None of the above.

13. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 9 units from the number 7.

A. $(-\infty, -2] \cup [16, \infty)$

B. $[-2, 16]$

C. $(-\infty, -2) \cup (16, \infty)$

D. $(-2, 16)$

E. None of the above

14. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7 - 3x \le \frac{-21x + 9}{8} < -9 - 7x$$

A. $[a, b)$, where $a \in [-28.5, -16.5]$ and $b \in [-9, -0.75]$

B. $(-\infty, a) \cup [b, \infty)$, where $a \in [-23.25, -18.75]$ and $b \in [-7.5, -1.5]$

C. $(a, b]$, where $a \in [-23.25, -18]$ and $b \in [-8.25, 1.5]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-24, -18]$ and $b \in [-3.75, 0]$

E. None of the above.

15. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 3 units from the number 2.

A. $(-\infty, 1] \cup [5, \infty)$

B. $[1, 5]$

C. $(-\infty, 1) \cup (5, \infty)$

D. $(1, 5)$

E. None of the above

16. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{10}{7} - \frac{7}{9}x \geq \frac{4}{4}x - \frac{10}{3}$$

A. $[a, \infty)$, where $a \in [0, 4.5]$

B. $[a, \infty)$, where $a \in [-3.75, 0]$

C. $(-\infty, a]$, where $a \in [0.75, 7.5]$

D. $(-\infty, a]$, where $a \in [-5.25, 0]$

E. None of the above.

17. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9 + 5x > 8x \text{ or } 5 + 3x < 4x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-5.25, -3.15]$ and $b \in [1.05, 3.3]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.65, -2.4]$ and $b \in [4.58, 6.15]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4.88, -2.62]$ and $b \in [3.52, 5.62]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6.52, -3.82]$ and $b \in [2.62, 4.65]$

E. $(-\infty, \infty)$

---

18. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-6}{7} + \frac{5}{8}x \le \frac{10}{3}x + \frac{4}{2}$$

A. $(-\infty, a]$, where $a \in [0, 1.5]$

B. $[a, \infty)$, where $a \in [0, 3]$

C. $(-\infty, a]$, where $a \in [-3, -0.75]$

D. $[a, \infty)$, where $a \in [-5.25, 0.75]$

E. None of the above.

---

19. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7x - 3 \ge -4x - 6$$

A. $(-\infty, a]$, where $a \in [-2.2, 0.8]$

B. $[a, \infty)$, where $a \in [0.66, 1.54]$

C. $(-\infty, a]$, where $a \in [-0.2, 3]$

D. $[a, \infty)$, where $a \in [-1.71, -0.18]$

E. None of the above.

---

20. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$7 + 5x > 8x \text{ or } 7 + 3x < 4x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.5, -6]$ and $b \in [-3, -1.5]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [0.75, 4.5]$ and $b \in [6, 12]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-8.25, -4.5]$ and $b \in [-5.25, 0.75]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [0, 5.25]$ and $b \in [3, 13.5]$

E. $(-\infty, \infty)$

---

21. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5x - 10 > -4x - 7$$

A. (a, ∞), where $a \in [-3, -1]$

B. $(-\infty, a)$, where $a \in [1, 4]$

C. (a, ∞), where $a \in [2, 13]$

D. $(-\infty, a)$, where $a \in [-9, -1]$

E. None of the above.

---

22. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 + 6x < \frac{26x + 8}{4} \le 8 + 5x$$

A. $[a, b)$, where $a \in [6, 10.5]$ and $b \in [-6, -3]$

B. $(-\infty, a) \cup [b, \infty)$, where $a \in [9, 16.5]$ and $b \in [-4.5, -3]$

C. $(-\infty, a] \cup (b, \infty)$, where $a \in [6.75, 15]$ and $b \in [-9.75, -1.5]$

D. $(a, b]$, where $a \in [8.25, 15]$ and $b \in [-6, -3]$

E. None of the above.

23. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 9 units from the number -9.

A. $[-18, 0]$

B. $(-18, 0)$

C. $(-\infty, -18) \cup (0, \infty)$

D. $(-\infty, -18] \cup [0, \infty)$

E. None of the above

---

24. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-6 + 8x < \frac{37x + 7}{4} \leq -9 + 5x$$

A. $[a, b)$, where $a \in [4.5, 9]$ and $b \in [1.5, 7.5]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [3.75, 7.5]$ and $b \in [1.5, 3.75]$

C. $(a, b]$, where $a \in [4.5, 7.5]$ and $b \in [0.75, 4.5]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [3, 7.5]$ and $b \in [-0.75, 3]$

E. None of the above.

---

25. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 3 units from the number 5.

A. $(-\infty, -2) \cup (8, \infty)$

B. $(-2, 8)$

C. $[-2, 8]$

D. $(-\infty, -2] \cup [8, \infty)$

E. None of the above

---

26. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{4}{4} - \frac{6}{8}x > \frac{4}{9}x - \frac{9}{5}$$

A. (a, ∞), where $a \in [-1.5, 4.5]$

B. (a, ∞), where $a \in [-3, 1.5]$

C. $(-\infty, a)$, where $a \in [-5.25, -2.25]$

D. $(-\infty, a)$, where $a \in [0, 5.25]$

E. None of the above.

---

27. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7 + 8x > 10x \text{ or } 9 + 5x < 7x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.06, -2.92]$ and $b \in [4.46, 5.05]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4.65, -3.6]$ and $b \in [2.25, 3.6]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3.6, -2.4]$ and $b \in [3.52, 6.38]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-5.65, -4.13]$ and $b \in [3.42, 3.78]$

E. $(-\infty, \infty)$

---

28. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{10}{8} - \frac{5}{2}x < \frac{4}{9}x - \frac{6}{3}$$

A. $(-\infty, a)$, where $a \in [-2.25, 0]$

B. $(-\infty, a)$, where $a \in [0, 3]$

C. (a, ∞), where $a \in [-1.88, -0.97]$

D. (a, ∞), where $a \in [1.05, 2.4]$

E. None of the above.

29. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9x - 9 < 4x + 5$$

A. $(-\infty, a)$, where $a \in [-2.6, -0.4]$

B. (a, ∞), where $a \in [-0.5, 1.63]$

C. (a, ∞), where $a \in [-1.14, -0.06]$

D. $(-\infty, a)$, where $a \in [-0.4, 2.9]$

E. None of the above.

30. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$5 + 4x > 7x \text{ or } 8 + 5x < 6x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.25, 6]$ and $b \in [3.75, 11.25]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-11.25, -5.25]$ and $b \in [-2.25, 0]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9, -5.25]$ and $b \in [-3, 3]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [0.75, 5.25]$ and $b \in [3.75, 9]$

E. $(-\infty, \infty)$